

with respect to the Information Disclosure Statement (IDS) filed September 16, 2002. Applicant therefore believes that the duty of disclosure set forth in 37 CFR § 1.56 has been met with respect to the references listed in the September 16, 2002 IDS. Future submissions will also comply with 37 CFR §§ 1.97-98.

Claims Allowable Over the Cited Art

The Examiner rejected Claims 1-20 as unpatentable in view of Chang, either alone or in combination with Lin, Wyler, and/or Ende. Applicant respectfully traverses this rejection and requests reconsideration and withdrawal of this rejection.

In support of this rejection, the Examiner cites "a heat sink 60" of Chang. Applicant respectfully submits that item 60 of Chang is not a heat sink. Change refers to item 60 as "a cover 60" (at column 3, line 19). A "cover" is not a "heat sink." Nothing in Chang teaches or suggests that cover 60 acts as a heat sink. In fact, showing that cover 60 includes ventilating slots 62 (at column 4, line 18) suggests that cover 60 does not dissipate heat and therefore does not act as a heat sink.

In response to Applicant's prior presentation of the argument of the previous paragraph, the Examiner stated in the March 10, 2003 final Office Action that Applicant's argument "is not persuasive because its structural arrangement and the presence of slots clearly suggest the heat sinking function as defining feature of a heat sink."

Applicant respectfully notes that, despite whatever lexicology or lexicography is used by Chang, upper cover 60 cannot reasonably be considered a heat sink as the term is generally

understood. The American Heritage Dictionary of the English Language, Fourth Edition, defines a heat sink as “A protective device that absorbs and dissipates the excess heat generated by a system.” Other definitions repeat the heat absorption and dissipation of heat sinks. The Free On-Line Dictionary of Computing (<http://www.foldoc.org>) defines a heat sink as “A piece of thermally conductive metal attached to a semiconductor or other electronic device and designed to prevent it from overheating by conducting heat away from it and radiating it to the environment.” Thus, heat absorption and thermal conductivity are defining features of a heat sink. To the extent the Examiner has taken Official Notice that a “heat sink” can include thermally insulating material with vents, Applicant hereby seasonably challenges such Official Notice and respectfully requests supporting documentation of the existence of such an unconventional interpretation of “heat sink.”

Chang neither teaches nor suggests that upper cover 60 is thermally conductive or otherwise absorbs and conducts heat. In fact, inclusion of ventilating slots 62 in upper cover 60 suggests that upper cover 60 is not thermally conductive. Such a suggestion is bolstered by the general knowledge that upper covers of disk carriers such as upper cover 60 of box body 40 are made of plastic, a thermally insulating material.

The only teaching, suggestion, or motivation for deviating from the ventilated, slotted plastic cover taught and suggested by Chang is provided by Applicant’s Specification at page 5, lines 22-25, which teaches that “the heat sink 100 can closely stack multiple memory storage devices in a memory storage housing ... without overheating.” Such stacking of Chang’s carrier would obstruct ventilating slots 62, and Chang does not provide any teaching or suggestion that upper cover 60 is, or any motivation that upper cover 60 should be, thermally conductive,

absorbing and dissipating heat, i.e., a heat sink.

Claims 1, 2, 5, 6, 13, 14, 17, and 18-20 stand rejected in view of Chang alone. Accordingly, Claims 1, 2, 5, 6, 13, 14, 17, and 18-20 are allowable over Chang since Chang neither teaches nor suggests a heat sink mounted on a carrier for holding a hard disk drive.

In support of his rejection of Claims 3, 4, 15, and 16, the Examiner cited Lin as teaching a filter mounted on a face plate. However, the Examiner has not cited any teaching or suggestion within Lin for the missing heat sink element of Chang. Therefore, any combination of Chang and Lin would also lack the missing "heat sink" element. Claims 3, 4, 15, and 16 are therefore allowable over Chang combined with Lin, assuming arguendo such a combination is properly motivated in the prior art.

In support of the rejection of Claims 7 and 8, the Examiner cited Wyler and Ende as alternative teachings of fins as heat sinks. Applicant respectfully submits that, since Chang teaches no heat sink, the specific characteristics of heat sinks taught by Wyler and Ende are not properly combined with Chang since teaching, suggestion, and motivation to combine the heat sinks of Wyler and/or Ende with Chang are all missing from the record. To the extent the Examiner has taken Official Notice for such motivation to combine the references, Applicant hereby seasonably challenges such Official Notice and respectfully requests supporting documentation.

In response to this previously presented argument, the Examiner stated that references "suggest that fins are commonly used on enclosing holding structures for heat generating devices." Applicant respectfully submits that, while Wyler and Ende may teach that heat sinks

can include fins, that neither reference teaches, suggests, or motivates one to replace the thermally insulating yet ventilated upper cover 60 of Chang with a heat sink, with or without fins.

Wyler teaches at column 6, lines 18-32, that heat sink 56, copper braiding 64, and metal bracket 62 provide a conductive heat path between a hard disk drive and the surrounding atmosphere through sound absorption material 66. Applicant finds no teaching, suggestion, or motivation in the cited art as to how such a conductive heat path would be advantageous in the carrier of Chang which is taught to already include ventilating slots 62.

Ende teaches (column 7, lines 14-20) that the cover 12 of the hard drive itself has fins 104 to dissipate heat. Since the hard drive itself has heat dissipating fins in Ende, it is counter-intuitive to add a heat sink to the carrier designed to hold such a hard disk.

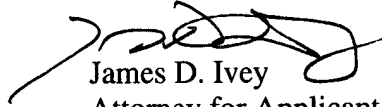
Thus, neither Wyler nor Ende teach or suggest adding a heat sink to the heat-sink-less carrier taught by Chang. Accordingly, Claims 7 and 8 are allowable over Chang in view of Wyler and/or Ende.

The Examiner rejected Claims 9-12 as unpatentable over Chang in view of Wyler and Lin. Claims 9-12 are allowable over the cited art for at least the reasons given above.

Conclusion

Claims 1-20 are now in a condition for allowance and such action is respectfully requested. If the Examiner's next action is other than for allowance of claims 1-20 or if the Examiner has any questions or comments with respect to the above identified case, the Examiner is respectfully invited to telephone the undersigned at (510) 336-1100.

Respectfully submitted,


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